

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-22 (Canceled)

23. (Previously presented) A semiconductor device comprising:

a pixel region in which a plurality of thin film transistors are arranged in matrix;

a picture signal supply source for supplying a picture signal;

a switching circuit connected to a source signal line and a plurality of voltage lines for selecting at least one of said voltage lines;

a latch circuit for supplying said picture signal from said picture signal supply source to said switching circuit;

a memory for storing data used in gamma correction of a voltage applied to said at least one of said voltage lines; and

a gamma correction control circuit for adjusting said voltage based on said data to carry out said gamma correction of said voltage,

wherein said plurality of thin film transistors and said memory and said gamma correction control circuit are provided over a same insulating surface.

24. (Previously presented) A device according to claim 23 wherein said memory comprises a nonvolatile memory.

25. (Previously presented) A device according to claim 23 wherein said picture signal is a

digital signal.

26. (Previously presented) A device according to claim 23 wherein the picture signal is an analog signal, and the semiconductor device further comprises a conversion circuit for converting said analog signal to a digital signal.

27. (Previously presented) A device according to claim 23 wherein an active layer of each of said thin film transistors has a thickness of 10 to 100 nm.

28. (Previously presented) A device according to claim 23 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

29. (Previously presented) A device according to claim 23 further comprising a shift register.

30. (Previously presented) A device according to claim 23 wherein said memory comprises a thin film transistor.

31. (Previously presented) A device according to claim 23 wherein said gamma correction control circuit comprises a thin film transistor.

32. (Previously presented) A semiconductor device comprising:

an electroluminescence element;

a pixel region in which a plurality of thin film transistors are arranged in matrix;

a picture signal supply source for supplying a picture signal;

a switching circuit connected to a source signal line and a plurality of voltage lines for selecting at least one of said voltage lines;

a latch circuit for supplying said picture signal from said picture signal supply source to said switching circuit;

a memory for storing data used in gamma correction of a voltage applied to said at least one of said voltage lines; and

a gamma correction control circuit for adjusting said voltage based on said data to carry out said gamma correction of said voltage,

wherein said plurality of thin film transistors and said memory and said gamma correction control circuit are provided over a same insulating surface.

33. (Previously presented) A device according to claim 32 wherein said memory comprises a nonvolatile memory.

34. (Previously presented) A device according to claim 32 wherein said picture signal is a digital signal.

35. (Previously presented) A device according to claim 32 wherein the picture signal is an analog signal, and the semiconductor device further comprises a conversion circuit for converting said analog signal to a digital signal.

36. (Previously presented) A device according to claim 32 wherein an active layer of each of said thin film transistors has a thickness of 10 to 100 nm.

37. (Previously presented) A device according to claim 32 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

38. (Previously presented) A device according to claim 32 further comprising a shift register.

39. (Previously presented) A device according to claim 32 wherein said memory comprises a thin film transistor.

40. (Previously presented) A device according to claim 32 wherein said gamma correction control circuit comprises a thin film transistor.

41. (New) A semiconductor device comprising:

an active layer provided over a substrate; and

a floating gate provided adjacent to said active layer with a gate insulating film therebetween,

wherein 90 % or more of total bonds formed in a crystal grain boundary of said active layer are constituted by conformity bonds.

42. (New) A device according to claim 41 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

43. (New) A device according to claim 41 wherein said substrate comprises a material selected from the group consisting of quartz, silicon and ceramic.

44. (New) A device according to claim 41 wherein said active layer comprises silicon.

45. (New) A device according to claim 41 wherein said floating gate comprises a material selected from the group consisting of aluminum and silicon.

46. (New) A semiconductor device comprising:
an active layer provided over a substrate; and
a floating gate provided adjacent to said active layer with a gate insulating film therebetween,
wherein a subthreshold coefficient of said semiconductor device is 60 to 100 mV/decade.

47. (New) A device according to claim 46 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head

mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

48. (New) A device according to claim 46 wherein said substrate comprises a material selected from the group consisting of quartz, silicon and ceramic.

49. (New) A device according to claim 46 wherein said active layer comprises silicon.

50. (New) A device according to claim 46 wherein said floating gate comprises a material selected from the group consisting of aluminum and silicon.

51. (New) A semiconductor device comprising:

- an active layer provided over a substrate;
- a source region and a drain region provided in said active layer; and
- a floating gate provided adjacent to said active layer with a gate insulating film therebetween,

wherein said source region and said drain region contain a P type impurity,

wherein mobility of said semiconductor device is 100 to 300 cm²/Vs, and

wherein said active layer has a thickness of 10 to 100 nm.

52. (New) A device according to claim 51 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a

mobile computer and a portable telephone.

53. (New) A device according to claim 51 wherein said substrate comprises a material selected from the group consisting of quartz, silicon and ceramic.

54. (New) A device according to claim 51 wherein said active layer comprises silicon.

55. (New) A device according to claim 51 wherein said floating gate comprises a material selected from the group consisting of aluminum and silicon.

56. (New) A device according to claim 51 wherein said P type impurity comprises boron.

57. (New) A semiconductor device comprising:

an active layer provided over a substrate;

a source region and a drain region provided in said active layer;

a floating gate provided adjacent to said active layer with a gate insulating film therebetween; and

an insulating film comprising an organic resin provided over said floating gate to provide a leveled upper surface over said floating gate,

wherein said source region and said drain region contain a P type impurity,

wherein mobility of said semiconductor device is 100 to 300 cm²/Vs, and

wherein said active layer has a thickness of 10 to 100 nm.

58. (New) A device according to claim 57 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

59. (New) A device according to claim 57 wherein said substrate comprises a material selected from the group consisting of quartz, silicon and ceramic.

60. (New) A device according to claim 57 wherein said active layer comprises silicon.

61. (New) A device according to claim 57 wherein said floating gate comprises a material selected from the group consisting of aluminum and silicon.

62. (New) A device according to claim 57 wherein said P type impurity comprises boron.

63. (New) A device according to claim 57 wherein said organic resin comprises a material selected from the group consisting of polyimide, acryl, polyamide and polyimide amide.

64. (New) A semiconductor device comprising:

- a pixel region in which a plurality of thin film transistors are arranged in matrix;
- a picture signal supply source for supplying a picture signal;
- a switching circuit connected to a plurality of voltage lines for selecting at least one of said voltage lines;

a latch circuit for supplying said picture signal from said picture signal supply source to said switching circuit;

a gamma correction control circuit for adjusting a voltage applied to said at least one of said voltage lines,

wherein said plurality of thin film transistors and said gamma correction control circuit are provided over a same insulating surface.

65. (New) A device according to claim 64 wherein said picture signal is a digital signal.

66. (New) A device according to claim 64 wherein the picture signal is an analog signal, and the semiconductor device further comprises a conversion circuit for converting said analog signal to a digital signal.

67. (New) A device according to claim 64 wherein an active layer of each of said thin film transistors has a thickness of 10 to 100 nm.

68. (New) A device according to claim 64 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

69. (New) A device according to claim 64 further comprising a shift register.

70. (New) A device according to claim 64 wherein said gamma correction control circuit comprises a thin film transistor.

71. (New) A semiconductor device comprising:

- an electroluminescence element;
- a pixel region in which a plurality of thin film transistors are arranged in matrix;
- a picture signal supply source for supplying a picture signal;
- a switching circuit connected to a plurality of voltage lines for selecting at least one of said voltage lines;
- a latch circuit for supplying said picture signal from said picture signal supply source to said switching circuit;
- a gamma correction control circuit for adjusting a voltage applied to said at least one of said voltage lines,

wherein said plurality of thin film transistors and said gamma correction control circuit are provided over a same insulating surface.

72. (New) A device according to claim 71 wherein said picture signal is a digital signal.

73. (New) A device according to claim 71 wherein the picture signal is an analog signal, and the semiconductor device further comprises a conversion circuit for converting said analog signal to a digital signal.

74. (New) A device according to claim 71 wherein an active layer of each of said thin film

transistors has a thickness of 10 to 100 nm.

75. (New) A device according to claim 71 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

76. (New) A device according to claim 71 further comprising a shift register.

77. (New) A device according to claim 71 wherein said gamma correction control circuit comprises a thin film transistor.

78. (New) A semiconductor device comprising:

a pixel region in which a plurality of thin film transistors are arranged in matrix;

a picture signal supply source for supplying a picture signal;

a switching circuit connected to a plurality of voltage lines for selecting at least one of said voltage lines;

a latch circuit for supplying said picture signal from said picture signal supply source to said switching circuit;

a memory for storing data used in gamma correction of a voltage applied to said at least one of said voltage lines;

a gamma correction control circuit for adjusting said voltage based on said data to carry out said gamma correction of said voltage,

wherein said plurality of thin film transistors and said memory and said gamma correction control circuit are provided over a same insulating surface.

79. (New) A device according to claim 78 wherein said memory comprises a nonvolatile memory.

80. (New) A device according to claim 78 wherein said picture signal is a digital signal.

81. (New) A device according to claim 78 wherein the picture signal is an analog signal, and the semiconductor device further comprises a conversion circuit for converting said analog signal to a digital signal.

82. (New) A device according to claim 78 wherein an active layer of each of said thin film transistors has a thickness of 10 to 100 nm.

83. (New) A device according to claim 78 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

84. (New) A device according to claim 78 further comprising a shift register.

85. (New) A device according to claim 78 wherein said memory comprises a thin film

transistor.

86. (New) A device according to claim 78 wherein said gamma correction control circuit comprises a thin film transistor.

87. (New) A semiconductor device comprising:

- an electroluminescence element;

- a pixel region in which a plurality of thin film transistors are arranged in matrix;

- a picture signal supply source for supplying a picture signal;

- a switching circuit connected to a plurality of voltage lines for selecting at least one of said voltage lines;

- a latch circuit for supplying said picture signal from said picture signal supply source to said switching circuit;

- a memory for storing data used in gamma correction of a voltage applied to said at least one of said voltage lines;

- a gamma correction control circuit for adjusting said voltage based on said data to carry out said gamma correction of said voltage,

wherein said plurality of thin film transistors and said memory and said gamma correction control circuit are provided over a same insulating surface.

88. (New) A device according to claim 87 wherein said memory comprises a nonvolatile memory.

89. (New) A device according to claim 87 wherein said picture signal is a digital signal.

90. (New) A device according to claim 87 wherein the picture signal is an analog signal, and the semiconductor device further comprises a conversion circuit for converting said analog signal to a digital signal.

91. (New) A device according to claim 87 wherein an active layer of each of said thin film transistors has a thickness of 10 to 100 nm.

92. (New) A device according to claim 87 wherein said semiconductor device is incorporated into one selected from the group consisting of a video camera, a still camera, a projector, a head mount display, a car navigation system, a personal computer, a portable information terminal, a mobile computer and a portable telephone.

93. (New) A device according to claim 87 further comprising a shift register.

94. (New) A device according to claim 87 wherein said memory comprises a thin film transistor.

95. (New) A device according to claim 87 wherein said gamma correction control circuit comprises a thin film transistor.